



# Analysis of Regional Development Bank Capability in Indonesia

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## ABSTRACT

The aim of this research is to analyze the regional development bank capability in Indonesia during 2019-2021. The analysis method used is Data Envelopment Analysis (DEA) with Variabel Return to Scale (VRS). Input oriented is applied as efficiency model. Input variables in this research are network of offices, total ATM, number of employees, interest expense, and operational expenses. While there are two output variables are loans and third party funding (DPK). The result show that 8 on 26 BPDs has relative efficient during period 2019-2021. Average efficiency during period time is 83,5%. Meanwhile the lowest of average efficiency is 2021 with average efficiency is 77,8%. The number of employees is the main factor of most BPD's inefficient in 2021. Therefore BPD can take steps to improve efficiency by reviewing staffing policies and maximizing the number of inputs owned so that the inputs used are in accordance with the outputs obtained by referring to BPD's that have been efficient.

**Keywords:** *Efficiency, Regional Development Bank, Data Envelopment Analysis (DEA), BOPO, NIM*

## 1. INTRODUCTION

The banking industry has a very important role in the Indonesian economy both on a macro and micro basis as an intermediary institution. In Indonesia, the share of the banking market in the entire financial system is 80%, so performance evaluation is needed (Abidin, 2007).

Regional Development Bank (BPD) as one of the tools for regional autonomy is a bank that is established with part or all of its shares owned by the Regional Government (Agustin, 2013) so that BPD is very closely related to the regional economy. Regulation of the Minister of Home Affairs Number 62 of 1999 Article 2 concerning the Organizational and Working Procedures of Regional Development Banks states that the BPD has the main purpose of developing the economy and driving regional development through its activities as a bank. It is further explained in Article 3 that to carry out

these main tasks, the BPD will carry out several functions, including:

- Drivers for creating levels of economic growth and regional development in the context of improving people's living standards..
- Regional treasury holders and/or keep Regional Money.
- One of local revenue (PAD).

Considering that the role and tasks carried out by the BPD are not small in promoting regional development, the BPD must also be managed seriously. Good management will produce efficient performance to contribute positively to regional progress.

The Regional Development Bank (BPD) as a regionally owned enterprise (BUMD) is one of the regionally owned financial institutions (banking) that carries out the financial intermediary function. BPD is required at any time to increase its role and performance in supporting regional development, especially economic

development. However in carrying out business activities, BPD must still comply with the principles of transparency and accountability as a public financial institution, including its financial performance. Management of a Regional Development Bank (BPD) that is professional, accountable, and has high competitiveness will strengthen the role of the BPD in carrying out its duties as a driving force for development and the regional economy.

If the bank's performance is good, then the overall economy will also be good. The ability of banks to survive amid increasingly fierce product and service competition, as well as the ability to allocate financial resources to increase investment activities that can spur the economy. Furthermore, the ability of the banking itself is an illustration of the achievements achieved in bank terms of finance, marketing, collection and distribution of funds, technology, and human resources (HR). A bank's financial performance is a picture of a bank's financial condition in a certain period, both in terms of raising funds and channeling funds, which are usually measured by financial indicators such as capital adequacy, liquidity, and bank profitability.

Kasri dan Azzahra (2020) said exchange rates, financial inclusion, rate of return on assets, and growth in credit/financing extended by the banking sector have a positive effect on bank stability. Meanwhile, interest rates have a negative effect on bank stability. Sutanto (2015) said that Regional Development Banks in Indonesia have not all achieved efficiency with an average efficiency level of 93.2%. As many as 12 banks from 26 BPD throughout Indonesia have achieved 100% efficiency. Meanwhile, the other 14 BPDs were not efficient. This is also supported by Rosyada (2011) who states that from 2018-2019 only the East Kalimantan BPD consistently has a maximum efficiency level of 100%, while the North Sumatra and Central Java BPD have experienced a decrease in efficiency levels.

The purpose of this research is to analyze the capability of Regional Development Banks in Indonesia.

## 2. LITERATURE REVIEW

### 2.1. Efficient

Based on the Kamus Besar Bahasa Indonesia (KBBI), efficiency means the accuracy of work methods/efforts in carrying out something without wasting time and money. In summary, the higher the ratio, the higher the level of efficiency because the lower the cost of output required to produce a unit of output. Rakshit and Bardhan (2022) said that cost, revenue, profit efficiencies positively affect the profitability conditions of Indian banks. Second, inefficient banks hurt bank performance, even though the global financial crisis affected the efficiency-profitability relationship.

Efficiency explained in terms of input and output is the ratio between output and input. According to Muharam and Pusvitasari in Wahab (2015), there are three types of approaches that can be taken to measure efficiency, including:

#### 1. Ratio Approach

The ratio approach measures efficiency by calculating the ratio of output and input used.

#### 2. Regression Approach

This approach measures efficiency using a model of a given output level as a function of a given input level.

#### 3. Frontier Approach

This frontier approach in measuring efficiency is divided into two types, namely parametric and non-parametric frontier approaches. The parametric frontier approach can be measured by parametric statistical tests such as the Stochastic Frontier Analysis (SFA) method, while the non-parametric frontier approach can be measured using Data Envelopment Analysis (DEA).

### 2.2. Banking

In practice, the banking system consists of a Unit Banking System and a Branch Banking System. The characteristics of a bank that adheres to this Branch Banking System include:

1. Banks are more flexible.
2. Banks may conduct intermediary locations.
3. Banks can expand physically to new economic areas (especially growth centers).
4. The head office makes long-term planning, while the branch offices make short-term planning.
5. Delegation of authority is clearer and more stable, especially in deciding credit based on branch status.

Based on Ownership Status, banks are also divided into:

1. State Owned Bank.
2. National Private Owned Bank.
3. Foreign Private Banks.
4. Regional Development Bank.
5. Mixed Bank.

### 2.3. Regional Development Banks (BPD)

Regional Development Banks (BPD) are banks whose main collection of funds comes from deposits or by issuing medium and long term securities, as well as by providing credit, especially in the development sector in their credit activities.

BPD cannot be separated from the regional economy, so its name is closely related to the area where the bank was founded. This affects the characteristics of BPD which are different from other commercial banks, namely the majority of DPK are regional government funds. In addition, the focus of DPK BPD is current accounts (Sunarsip, 2004), while savings and deposit products are still relatively small, making it quite difficult for BPD to become a bank capable of financing long-term loans (investments).

According to Rabbani (2014) the objectives of establishing a Regional Development Bank include:

1. Become a leading bank in the region.
2. Help accelerate development.
3. Community economic empowerment.
4. As a populist elite healthy bank.
5. As a driver of regional economic growth.
6. As a source of regional income.
7. As coaches, owners and partners of small and medium enterprises.

### 3. RESEARCH METHODS

This study uses a descriptive approach combined with Data Envelopment Analysis (DEA) analysis using Variable Return To Scale (VRS) assumptions and input oriented models. This study analyzes the performance of the Indonesian Regional Development Bank from 2019 to 2021.

DEA is a mathematical programming used to evaluate the relative efficiency of a set of decision-making units (DMUs) in managing resources (inputs) to achieve results (outputs) where the form-function relationship from input to output is unknown. Data Envelopment Analysis in evaluating the efficiency ratio will not be more than 1 (one) because 1 (one) is a condition where an activity unit has reached an efficient condition. Based on the scale relationship between input and output variables, efficiency measurement in this study will be carried out using the Variable Return To Scale (VRS) approach with an input oriented approach. The efficiency score is calculated with the help of DEAP (Data Envelopment Analysis Program) Version 2.1.

After that, a comparison was made between the results of DEA processing and the BOPO value and NIM of Regional Development Banks in Indonesia, the data of which was obtained through the Regional Development Bank financial reports during the 2019 to 2021 research period.

### 4. FIGURES AND TABLES

Based on SE BI No. 13/24/DPNP/2011, the BOPO assessment criteria are as follows:

**Table 1.** BOPO Criteria

No.	Skala	Keterangan
1	<83%	Very Healthy
2	83% - 85%	Healthy
3	85% - 87%	Quite Healthy
4	87% - 89%	Less
5	>89%	Unhealthy

Furthermore, besides BOPO, the efficiency level of BPD can also be seen from the NIM value with the NIM criteria, among others :

**Table 2.** NIM Criteria

No.	Skala	Keterangan
1	>2.5%	Very Healthy
2	2% - 2,5%	Healthy
3	1,5% - 2%	Quite Healthy
4	1% - 1,5%	Less
5	<1%	Unhealthy

Furthermore, in Bank Indonesia Regulation Number 13/1/PBI/2011 it is emphasized that the best NIM standard is 5%. Banking with a NIM that is too high will have a negative impact on long-term economic conditions because the high cost of borrowing, especially for people with low incomes, will stagnate the economy. This condition will then affect the ability of these people to finance their businesses and expand their business so that it will affect the stability of the country's economy which has an impact on increasing inflation.

### 5. RESULT AND DISCUSSION

The results of Data Envelopment Analysis (DEA) processing show that there are only 8 on 26 BPDs that are constantly in an efficient position for a three-year period with an average efficiency level is 83.5% for the three-year period, including BPD South Sulawesi and West Sulawesi, BPD NTB Syariah, BPD Bali, BPD Maluku and North Maluku, BPD Banten, BPD West Java and Banten, BPD Central Java, and BPD of Jambi. The 2021 period is the period with the lowest average efficiency level, which is 77.8%, where the highest period occurs in 2019 with an average efficiency level of 93.8%.

In 2019 there were 16 BPDs that achieved efficiency levels (61.5%) are BPD South Sulawesi and West Sulawesi, BPD NTB, BPD Bali, BPD Maluku and North Maluku, BPD Bengkulu, BPD Southeast Sulawesi, BPD Banten, BPD West Java and Banten, BPD DKI Jakarta, BPD DIY, BPD Central Java, BPD East Java, BPD Jambi, BPD North Sumatra, BPD Lampung, and BPD South Kalimantan. The remaining 10 BPD (38.5%) are not yet efficient in carrying out their activities. Furthermore, the BPD which has been

efficient will become a reference for the BPD which is not efficient in order to increase its level of efficiency (peer). In addition, the calculation results with the DEA also show that the BPD is the benchmark, namely the BPD with the most number of peer groups, in 2019 BPD Bengkulu is the benchmark.

However, in 2020 and 2021 there will be a significant decrease in the number of BPDs that reach the level of efficiency, namely 10 BPDs out of a total of 26 BPDs, including BPD South Sulawesi and West Sulawesi, BPD NTB, BPD Bali, BPD Maluku and North Maluku, BPD Banten, BPD West Java and Banten, BPD Central Java, BPD Jambi, BPD Riau Kepri, and BPD East Kalimantan and North Kalimantan. Among the ten BPDs, only 8 BPDs were able to maintain their positions in the efficient BPD category, while the BPD Riau Kepri and BPD East Kalimantan and North Kalimantan were BPDs that rose to the position of efficient BPDs after becoming BPDs in the inefficient category in 2019. Apart from being the impact of Covid-19 that occurred in 2020, this condition is also caused by the performance of the BPD itself.

Meanwhile, when viewed from the inefficient BPD slack input, the biggest cause of BPD inefficiency that occurred in 2019 was operational costs. Operational costs became input slack in 9 BPDs that were inefficient (only 1 BPD whose inefficiencies were not caused by operational costs). In 2020 and 2021, the input variables in the form of the number of ATMs and the number of employees are the most inputs that must be reduced in the slack input of the results of this study based on DEA data processing. In 2021 specifically has input slack, namely the number of employees (occurring in 15 out of 16 inefficient BPDs), followed by the number of ATMs (occurring in 12 inefficient BPDs), interest expenses (occurring in 8 inefficient BPDs), fees operations (occurs in 4 inefficient BPDs), and number of offices (occurs in 3 inefficient BPDs).

Furthermore, if we look back at the BPDs that are in the very healthy category, there is only 1 (one) BPD which is the best NIM scores in 2019 and 2020, namely the BPD Jambi and the BPD NTB Syariah. Whereas in 2021 the BPDs that fall into the category of BPDs with the best NIM scores are 5 (five) BPDs, namely BPD NTB Syariah, BPD Lampung, BPD South Kalimantan, BPD Riau Kepri, and BPD East Kalimantan and North Kalimantan.

It is known that there are 7 BPD out of 26 BPD which can be said to be "capable" based on the indicators DEA, BOPO, NIM because they are efficient in DEA and healthy in BOPO and NIM, namely BPD West Java and Banten, BPD Central Java, BPD Sulawesi South and West Sulawesi, BPD Bali, BPD Maluku and North Maluku, BPD Jambi, and BPD NTB Syariah. However, specifically there are BPDs that fall into the unhealthy category on BOPO but are efficient on their DEA

results, namely BPD Banten with a BOPO and NIM values of 158.33 and 1.28 and DEA score of 1,000 (efficient). This situation is due to the condition of BPD Banten in 2020 which is the performance improvement phase after Banten Provincial Government funds stored in Bank Banten were transferred to West Java and Banten Banks, then followed by massive withdrawals of public funds who became BPD Banten customers that impact on big profit loss.

The biggest cause of the inefficiency of Regional Development Banks is caused by the number of employees and the number of ATMs owned which have not yet provided optimal results for the Regional Development Banks themselves, so that it can be concluded that the policies taken by the Regional Development Banks are still inaccurate regarding the use of inputs to achieve maximum output.

The main goal of the bank itself is to make a profit. For Regional Revenue Banks internally, the greater the profit earned, the greater the capital that can be used in carrying out its operations. The more Third Party Funds (one of which is savings) that is owned followed by the large number of credit distributions made (with maintained current credit conditions (low NPL)), the profit that will be owned will also be large.

## CONCLUSION

Based on the results of the research that has been done, it can be said that from every year of the research period conducted there are still BPDs that are not efficient. The biggest cause of the inefficiency of Regional Development Banks is caused by the number of employees and the number of ATMs owned which have not yet provided optimal results for the Regional Development Banks themselves, so that it can be concluded that the policies taken by the Regional Development Banks are still inaccurate regarding the use of inputs to achieve maximum output.

The main goal of the bank itself is to make a profit. For Regional Development Banks, the greater profit earned, the greater the capital that can be used in carrying out its operational activities. Profits are obtained from activities/transactions between banks and the public through products offered by banks such as savings and loans. The more Third Party Funds (one of which is savings) that is followed by the large number of credit distributions made (with maintained current credit conditions (low NPL)), the profit will also be big. Appropriate credit distribution to the right community will increase in their income so that it will increase the consumption and productivity of the people in the area which will have a direct impact on the economy and regional development.

Furthermore, as a Regional Development Bank that becomes the treasury of the Regional Government, improving the local community's economy will become

a source of PAD for the region in other income posts. This post is income derived from the profit share of equity participation made by the regional government in an effort to increase and develop. This equity participation will support the activities of the Regional Development Bank itself. However, in this capital participation, the regional government will still consider the health level and the level of profitability of the BPD. Therefore, the greater profit earned by Regional Development Banks from the banking activities they carry out, the greater dividend that Regional Development Banks can provide to regional governments as a form of their contribution to PAD.

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